

## Sequence Listing

<110> Botstein,David  
Desnoyers,Luc  
Ferrara,Napoleone  
Fong,Sherman  
Gao,Wei-Qiang  
Goddard,Audrey  
Gurney,Austin L.  
Pan,James  
Roy,Margaret Ann  
Stewart,Timothy A.  
Tumas,Daniel  
Watanabe,Colin K.  
Wood,William I.

<120> Secreted and Transmembrane Polypeptides and Nucleic  
Acids Encoding the Same

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<151> 1999-02-09

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<151> 2000-03-03

<150> PCT/US99/12252

<151> 1999-06-02

<150> PCT/US99/28634

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<140> US 09/866,034

<141> 2001-05-25

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 50 55 60  
 Val Ser Ser Arg Lys Gln Gln Asn Val Asp Gln Ala Val Ala Thr  
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Leu	Ala	Ile	Glu	Leu	Ala	Pro	Arg	Asn	Ile	Arg	Val	Asn	Cys	Leu
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Ala	Pro	Gly	Leu	Ile	Lys	Thr	Ser	Phe	Ser	Arg	Met	Leu	Trp	Met
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Asp	Lys	Glu	Lys	Glu	Glu	Ser	Met	Lys	Glu	Thr	Leu	Arg	Ile	Arg
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Arg	Leu	Gly	Glu	Pro	Glu	Asp	Cys	Ala	Gly	Ile	Val	Ser	Phe	Leu
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 His Val Leu Gly Met Val Pro Pro Ala Cys Leu Pro Gly Asp Glu  
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 Val Gly Ser Glu Gln Arg Gly Glu Gln Val Thr Asn Gly Arg Glu  
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 Ala Gly Ala Glu Leu Leu Thr Glu Val Asn Arg Leu Gly Ser Gly  
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Pro Glu Leu Cys	Leu Glu Glu Leu Asp Ala Ala Ile Pro Gly	Ser
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Arg Ala Val Gly	Gly Ser Lys Ala Arg Val Gln Ala Arg Gln	Val
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Pro Pro Ala Thr	Ala Ser Glu Trp Arg Leu Ala Gln Ala Gln	Gln
185	190	195
Lys Ile Arg Glu	Leu Ala Ile Asn Ile Arg Met Lys Glu Glu	Leu
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Ile Gly Glu Leu	Val Arg Thr Gly Lys Ala Ala Gln Ala Leu	Asn
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260	265	270
Gln Glu Phe Arg	Arg Arg Val Ala Ala Ala Gln Ser Gln Val	Gln
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Val Leu Lys Glu	Lys Lys Gln Ala Thr Glu Arg Leu Val Ser	Leu
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Glu Glu Thr Glu	Gln Lys Arg Arg Leu Glu Ala Glu Met Ser	Lys
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Arg Gln His Arg	Val Lys Glu Leu Glu Leu Lys His Glu Gln	Gln
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Leu Met Gln Glu	Lys Thr Gly Leu Glu	Ser Lys Arg Leu Arg Ser			
	440	445			450
Ser Gln Ala Leu	Asn Glu Asp Ile Val	Arg Val Ser Ser Arg Leu			
	455	460			465
Glu His Leu Glu	Lys Glu Leu Ser Glu	Lys Ser Gly Gln Leu Arg			
	470	475			480
Gln Gly Ser Ala	Gln Ser Gln Gln Gln	Ile Arg Gly Glu Ile Asp			
	485	490			495
Ser Leu Arg Gln	Glu Lys Asp Ser Leu	Leu Lys Gln Arg Leu Glu			
	500	505			510
Ile Asp Gly Lys	Leu Arg Gln Gly Ser	Leu Leu Ser Pro Glu Glu			
	515	520			525
Glu Arg Thr Leu	Phe Gln Leu Asp Glu	Ala Ile Glu Ala Leu Asp			
	530	535			540
Ala Ala Ile Glu	Tyr Lys Asn Glu Ala	Ile Thr Cys Arg Gln Arg			
	545	550			555
Val Leu Arg Ala	Ser Ala Ser Leu Leu	Ser Gln Cys Glu Met Asn			
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Leu Met Ala Lys	Leu Ser Tyr Leu Ser	Ser Ser Glu Thr Arg Ala			
	575	580			585
Leu Leu Cys Lys	Tyr Phe Asp Lys Val	Val Thr Leu Arg Glu Glu			
	590	595			600
Gln His Gln Gln	Gln Ile Ala Phe Ser	Glu Leu Glu Met Gln Leu			
	605	610			615
Glu Glu Gln Gln	Arg Leu Val Tyr Trp	Leu Glu Val Ala Leu Glu			
	620	625			630
Arg Gln Arg Leu	Glu Met Asp Arg Gln	Leu Thr Leu Gln Gln Lys			
	635	640			645
Glu His Glu Gln	Asn Met Gln Leu Leu	Leu Gln Gln Ser Arg Asp			
	650	655			660
His Leu Gly Glu	Gly Leu Ala Asp Ser	Arg Arg Gln Tyr Glu Ala			
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Arg Ile Gln Ala	Leu Glu Lys Glu Leu	Gly Arg Tyr Met Trp Ile			
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 Lys Ile Tyr Asn Pro Ser Glu Gln Cys Cys Tyr Asp Asp Ala Ile  
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 Leu Ser Leu Lys Glu Thr Arg Arg Cys Gly Ser Thr Cys Thr Phe  
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 Trp Pro Cys Phe Glu Leu Cys Cys Pro Glu Ser Phe Gly Pro Gln  
 80 85 90  
 Gln Lys Phe Leu Val Lys Leu Arg Val Leu Gly Met Lys Ser Gln  
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<210> 10  
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<212> PRT  
<213> Homo sapiens

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Glu Lys Arg Glu His Ala Thr Arg Asp Gly Pro Gly Arg Val Asn  
50 55 60  
Glu Leu Gly Arg Pro Ala Arg Asp Glu Gly Gly Ser Gly Arg Asp  
65 70 75  
Trp Lys Ser Lys Ser Gly Arg Gly Leu Ala Gly Arg Glu Pro Trp  
80 85 90  
Ser Lys Leu Lys Gln Ala Trp Val Ser Gln Gly Gly Gly Ala Lys  
95 100 105  
Ala Gly Asp Leu Gln Val Arg Pro Arg Gly Asp Thr Pro Gln Ala  
110 115 120  
Glu Ala Leu Ala Ala Ala Ala Gln Asp Ala Ile Gly Pro Glu Leu  
125 130 135  
Ala Pro Thr Pro Glu Pro Pro Glu Glu Tyr Val Tyr Pro Asp Tyr  
140 145 150  
Arg Gly Lys Gly Cys Val Asp Glu Ser Gly Phe Val Tyr Ala Ile  
155 160 165  
Gly Glu Lys Phe Ala Pro Gly Pro Ser Ala Cys Pro Cys Leu Cys  
170 175 180  
Thr Glu Glu Gly Pro Leu Cys Ala Gln Pro Glu Cys Pro Arg Leu  
185 190 195  
His Pro Arg Cys Ile His Val Asp Thr Ser Gln Cys Cys Pro Gln  
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Cys Lys Glu Arg Lys Asn Tyr Cys Glu Phe Arg Gly Lys Thr Tyr  
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Gln Thr Leu Glu Glu Phe Val Val Ser Pro Cys Glu Arg Cys Arg



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<211> 437  
<212> PRT  
<213> Homo sapiens

<400> 16  
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His Val Trp Lys Val Ser Asp Leu Pro Arg Gln Trp Thr Pro Lys  
35 40 45  
Asn Thr Ser Cys Asp Ser Gly Leu Gly Cys Gln Asp Thr Leu Met  
50 55 60  
Leu Ile Glu Ser Gly Pro Gln Val Ser Leu Val Leu Ser Lys Gly  
65 70 75  
Cys Thr Glu Ala Lys Asp Gln Glu Pro Arg Val Thr Glu His Arg  
80 85 90  
Met Gly Pro Gly Leu Ser Leu Ile Ser Tyr Thr Phe Val Cys Arg  
95 100 105  
Gln Glu Asp Phe Cys Asn Asn Leu Val Asn Ser Leu Pro Leu Trp  
110 115 120  
Ala Pro Gln Pro Pro Ala Asp Pro Gly Ser Leu Arg Cys Pro Val  
125 130 135  
Cys Leu Ser Met Glu Gly Cys Leu Glu Gly Thr Thr Glu Glu Ile  
140 145 150  
Cys Pro Lys Gly Thr Thr His Cys Tyr Asp Gly Leu Leu Arg Leu  
155 160 165  
Arg Gly Gly Gly Ile Phe Ser Asn Leu Arg Val Gln Gly Cys Met  
170 175 180  
Pro Gln Pro Gly Cys Asn Leu Leu Asn Gly Thr Gln Glu Ile Gly  
185 190 195  
Pro Val Gly Met Thr Glu Asn Cys Asn Arg Lys Asp Phe Leu Thr  
200 205 210  
Cys His Arg Gly Thr Thr Ile Met Thr His Gly Asn Leu Ala Gln  
215 220 225  
Glu Pro Thr Asp Trp Thr Thr Ser Asn Thr Glu Met Cys Glu Val

10032900.123701



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Thr Ser Thr Leu	Val Gly Thr Lys Gly	Cys Ser Thr Val Gly Ala			
	260		265		270
Gln Asn Ser Gln	Lys Thr Thr Ile His	Ser Ala Pro Pro Gly Val			
	275		280		285
Leu Val Ala Ser	Tyr Thr His Phe Cys	Ser Ser Asp Leu Cys Asn			
	290		295		300
Ser Ala Ser Ser	Ser Ser Val Leu Leu	Asn Ser Leu Pro Pro Gln			
	305		310		315
Ala Ala Pro Val	Pro Gly Asp Arg Gln	Cys Pro Thr Cys Val Gln			
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Pro Leu Gly Thr	Cys Ser Ser Gly Ser	Pro Arg Met Thr Cys Pro			
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Arg Gly Ala Thr	His Cys Tyr Asp Gly	Tyr Ile His Leu Ser Gly			
	350		355		360
Gly Gly Leu Ser	Thr Lys Met Ser Ile	Gln Gly Cys Val Ala Gln			
	365		370		375
Pro Ser Ser Phe	Leu Leu Asn His Thr	Arg Gln Ile Gly Ile Phe			
	380		385		390
Ser Ala Arg Glu	Lys Arg Asp Val Gln	Pro Pro Ala Ser Gln His			
	395		400		405
Glu Gly Gly Gly	Ala Glu Gly Leu Glu	Ser Leu Thr Trp Gly Val			
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Gly Leu Ala Leu	Ala Pro Ala Leu Trp	Trp Gly Val Val Cys Pro			
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<210> 17  
 <211> 2387  
 <212> DNA  
 <213> Homo sapiens

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 <211> 487  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Tyr Phe Gly Thr Lys Thr Arg Tyr Glu Asp Val Asn Pro Val Leu  
 50 55 60  
 Leu Ser Gly Pro Glu Ala Pro Trp Arg Asp Pro Glu Leu Leu Glu  
 65 70 75  
 Gly Thr Cys Thr Pro Val Gln Leu Val Ala Leu Ile Arg His Gly  
 80 85 90  
 Thr Arg Tyr Pro Thr Val Lys Gln Ile Arg Lys Leu Arg Gln Leu  
 95 100 105  
 His Gly Leu Leu Gln Ala Arg Gly Ser Arg Asp Gly Gly Ala Ser

	110		115		120
Ser Thr Gly Ser	Arg Asp Leu Gly Ala	Ala Leu Ala Asp Trp	Pro		
	125	130	135		
Leu Trp Tyr Ala	Asp Trp Met Asp Gly	Gln Leu Val Glu Lys	Gly		
	140	145	150		
Arg Gln Asp Met	Arg Gln Leu Ala Leu	Arg Leu Ala Ser Leu	Phe		
	155	160	165		
Pro Ala Leu Phe	Ser Arg Glu Asn Tyr	Gly Arg Leu Arg Leu	Ile		
	170	175	180		
Thr Ser Ser Lys	His Arg Cys Met Asp	Ser Ser Ala Ala Phe	Leu		
	185	190	195		
Gln Gly Leu Trp	Gln His Tyr His Pro	Gly Leu Pro Pro Pro	Asp		
	200	205	210		
Val Ala Asp Met	Glu Phe Gly Pro Pro	Thr Val Asn Asp Lys	Leu		
	215	220	225		
Met Arg Phe Phe	Asp His Cys Glu Lys	Phe Leu Thr Glu Val	Glu		
	230	235	240		
Lys Asn Ala Thr	Ala Leu Tyr His Val	Glu Ala Phe Lys Thr	Gly		
	245	250	255		
Pro Glu Met Gln	Asn Ile Leu Lys Lys	Val Ala Ala Thr Leu	Gln		
	260	265	270		
Val Pro Val Asn	Asp Leu Asn Ala Asp	Leu Ile Gln Val Ala	Phe		
	275	280	285		
Phe Thr Cys Ser	Phe Asp Leu Ala Ile	Lys Gly Val Lys Ser	Pro		
	290	295	300		
Trp Cys Asp Val	Phe Asp Ile Asp Asp	Ala Lys Val Leu Glu	Tyr		
	305	310	315		
Leu Asn Asp Leu	Lys Gln Tyr Trp Lys	Arg Gly Tyr Gly Tyr	Thr		
	320	325	330		
Ile Asn Ser Arg	Ser Ser Cys Thr Leu	Phe Gln Asp Ile Phe	Gln		
	335	340	345		
His Leu Asp Lys	Ala Val Glu Gln Lys	Gln Arg Ser Gln Pro	Ile		
	350	355	360		
Ser Ser Pro Val	Ile Leu Gln Phe Gly	His Ala Glu Thr Leu	Leu		
	365	370	375		
Pro Leu Leu Ser	Leu Met Gly Tyr Phe	Lys Asp Lys Glu Pro	Leu		
	380	385	390		
Thr Ala Tyr Asn	Tyr Lys Lys Gln Met	His Arg Lys Phe Arg	Ser		
	395	400	405		

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His	Cys	Glu	Asn	Ala	Lys	Thr	Pro	Lys	Glu	Gln	Phe	Arg	Val	Gln
				425					430					435
Met	Leu	Leu	Asn	Glu	Lys	Val	Leu	Pro	Leu	Ala	Tyr	Ser	Gln	Glu
				440					445					450
Thr	Val	Ser	Phe	Tyr	Glu	Asp	Leu	Lys	Asn	His	Tyr	Lys	Asp	Ile
				455					460					465
Leu	Gln	Ser	Cys	Gln	Thr	Ser	Glu	Glu	Cys	Glu	Leu	Ala	Arg	Ala
				470					475					480
Asn	Ser	Thr	Ser	Asp	Glu	Leu								
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<210> 19  
 <211> 3554  
 <212> DNA  
 <213> Homo sapiens

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 gaagaaaatt caagatgaac aaaccacata tgtgtttttt gacaacaaaa 300  
 ttcagggaga cttggcgggt cgtgcagaaa tactggggaa gacatccctg 350  
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 ccca 3554

<210> 20  
 <211> 310  
 <212> PRT  
 <213> Homo sapiens  
 <400> 20

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Ala	Val	Asn	Leu	Lys	Ser	Ser	Asn	Arg	Thr	Pro	Val	Val	Gln	Glu	35	40	45	
Phe	Glu	Ser	Val	Glu	Leu	Ser	Cys	Ile	Ile	Thr	Asp	Ser	Gln	Thr	50	55	60	
Ser	Asp	Pro	Arg	Ile	Glu	Trp	Lys	Lys	Ile	Gln	Asp	Glu	Gln	Thr	65	70	75	
Thr	Tyr	Val	Phe	Phe	Asp	Asn	Lys	Ile	Gln	Gly	Asp	Leu	Ala	Gly	80	85	90	
Arg	Ala	Glu	Ile	Leu	Gly	Lys	Thr	Ser	Leu	Lys	Ile	Trp	Asn	Val	95	100	105	
Thr	Arg	Arg	Asp	Ser	Ala	Leu	Tyr	Arg	Cys	Glu	Val	Val	Ala	Arg	110	115	120	
Asn	Asp	Arg	Lys	Glu	Ile	Asp	Glu	Ile	Val	Ile	Glu	Leu	Thr	Val	125	130	135	
Gln	Val	Lys	Pro	Val	Thr	Pro	Val	Cys	Arg	Val	Pro	Lys	Ala	Val	140	145	150	
Pro	Val	Gly	Lys	Met	Ala	Thr	Leu	His	Cys	Gln	Glu	Ser	Glu	Gly	155	160	165	
His	Pro	Arg	Pro	His	Tyr	Ser	Trp	Tyr	Arg	Asn	Asp	Val	Pro	Leu	170	175	180	
Pro	Thr	Asp	Ser	Arg	Ala	Asn	Pro	Arg	Phe	Arg	Asn	Ser	Ser	Phe	185	190	195	
His	Leu	Asn	Ser	Glu	Thr	Gly	Thr	Leu	Val	Phe	Thr	Ala	Val	His	200	205	210	
Lys	Asp	Asp	Ser	Gly	Gln	Tyr	Tyr	Cys	Ile	Ala	Ser	Asn	Asp	Ala	215	220	225	
Gly	Ser	Ala	Arg	Cys	Glu	Glu	Gln	Glu	Met	Glu	Val	Tyr	Asp	Leu	230	235	240	
Asn	Ile	Gly	Gly	Ile	Ile	Gly	Gly	Val	Leu	Val	Val	Leu	Ala	Val	245	250	255	
Leu	Ala	Leu	Ile	Thr	Leu	Gly	Ile	Cys	Cys	Ala	Tyr	Arg	Arg	Gly	260	265	270	
Tyr	Phe	Ile	Asn	Asn	Lys	Gln	Asp	Gly	Glu	Ser	Tyr	Lys	Asn	Pro	275	280	285	
Gly	Lys	Pro	Asp	Gly	Val	Asn	Tyr	Ile	Arg	Thr	Asp	Glu	Glu	Gly				



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<211> 3437

<212> DNA

<213> Homo sapiens

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<211> 1029

<212> PRT

<213> Homo sapiens

<400> 22

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				20					25					30
Ile	Trp	Phe	Pro	Glu	Glu	Lys	Pro	Leu	Pro	Thr	Ala	Phe	Leu	Val
				35					40					45
Asp	Thr	Ser	Glu	Glu	Ala	Leu	Leu	Leu	Pro	Asp	Trp	Leu	Lys	Leu
				50					55					60
Arg	Met	Ile	Arg	Ser	Glu	Val	Leu	Arg	Leu	Val	Asp	Ala	Ala	Leu
				65					70					75
Gln	Asp	Leu	Glu	Pro	Gln	Gln	Leu	Leu	Leu	Phe	Val	Gln	Ser	Phe
				80					85					90
Gly	Ile	Pro	Val	Ser	Ser	Met	Ser	Lys	Leu	Leu	Gln	Phe	Leu	Asp
				95					100					105

Gln	Ala	Val	Ala	His	Asp	Pro	Gln	Thr	Leu	Glu	Gln	Asn	Ile	Met	110	115	120
Asp	Lys	Asn	Tyr	Met	Ala	His	Leu	Val	Glu	Val	Gln	His	Glu	Arg	125	130	135
Gly	Ala	Ser	Gly	Gly	Gln	Thr	Phe	His	Ser	Leu	Leu	Thr	Ala	Ser	140	145	150
Leu	Pro	Pro	Arg	Arg	Asp	Ser	Thr	Glu	Ala	Pro	Lys	Pro	Lys	Ser	155	160	165
Ser	Pro	Glu	Gln	Pro	Ile	Gly	Gln	Gly	Arg	Ile	Arg	Val	Gly	Thr	170	175	180
Gln	Leu	Arg	Val	Leu	Gly	Pro	Glu	Asp	Asp	Leu	Ala	Gly	Met	Phe	185	190	195
Leu	Gln	Ile	Phe	Pro	Leu	Ser	Pro	Asp	Pro	Arg	Trp	Gln	Ser	Ser	200	205	210
Ser	Pro	Arg	Pro	Val	Ala	Leu	Ala	Leu	Gln	Gln	Ala	Leu	Gly	Gln	215	220	225
Glu	Leu	Ala	Arg	Val	Val	Gln	Gly	Ser	Pro	Glu	Val	Pro	Gly	Ile	230	235	240
Thr	Val	Arg	Val	Leu	Gln	Ala	Leu	Ala	Thr	Leu	Leu	Ser	Ser	Pro	245	250	255
His	Gly	Gly	Ala	Leu	Val	Met	Ser	Met	His	Arg	Ser	His	Phe	Leu	260	265	270
Ala	Cys	Pro	Leu	Leu	Arg	Gln	Leu	Cys	Gln	Tyr	Gln	Arg	Cys	Val	275	280	285
Pro	Gln	Asp	Thr	Gly	Phe	Ser	Ser	Leu	Phe	Leu	Lys	Val	Leu	Leu	290	295	300
Gln	Met	Leu	Gln	Trp	Leu	Asp	Ser	Pro	Gly	Val	Glu	Gly	Gly	Pro	305	310	315
Leu	Arg	Ala	Gln	Leu	Arg	Met	Leu	Ala	Ser	Gln	Ala	Ser	Ala	Gly	320	325	330
Arg	Arg	Leu	Ser	Asp	Val	Arg	Gly	Gly	Leu	Leu	Arg	Leu	Ala	Glu	335	340	345
Ala	Leu	Ala	Phe	Arg	Gln	Asp	Leu	Glu	Val	Val	Ser	Ser	Thr	Val	350	355	360
Arg	Ala	Val	Ile	Ala	Thr	Leu	Arg	Ser	Gly	Glu	Gln	Cys	Ser	Val	365	370	375
Glu	Pro	Asp	Leu	Ile	Ser	Lys	Val	Leu	Gln	Gly	Leu	Ile	Glu	Val	380	385	390
Arg	Ser	Pro	His	Leu	Glu	Glu	Leu	Leu	Thr	Ala	Phe	Phe	Ser	Ala			

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Thr Ala Asp Ala	Ala Ser Pro Phe Pro	Ala Cys Lys Pro Val	Val		
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Gly Lys Pro Gly	Ala Asp Gly Gly Ser	Leu Glu Ala Val Arg	Leu		
	440	445	450		
Gly Pro Ser Ser	Gly Leu Leu Val Asp	Trp Leu Glu Met Leu	Asp		
	455	460	465		
Pro Glu Val Val	Ser Ser Cys Pro Asp	Leu Gln Leu Arg Leu	Leu		
	470	475	480		
Phe Ser Arg Arg	Lys Gly Lys Gly Gln	Ala Gln Val Pro Ser	Phe		
	485	490	495		
Arg Pro Tyr Leu	Leu Thr Leu Phe Thr	His Gln Ser Ser Trp	Pro		
	500	505	510		
Thr Leu His Gln	Cys Ile Arg Val Leu	Leu Gly Lys Ser Arg	Glu		
	515	520	525		
Gln Arg Phe Asp	Pro Ser Ala Ser Leu	Asp Phe Leu Trp Ala	Cys		
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Ile His Val Pro	Arg Ile Trp Gln Gly	Arg Asp Gln Arg Thr	Pro		
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Gln Lys Arg Arg	Glu Glu Leu Val Leu	Arg Val Gln Gly Pro	Glu		
	560	565	570		
Leu Ile Ser Leu	Val Glu Leu Ile Leu	Ala Glu Ala Glu Thr	Arg		
	575	580	585		
Ser Gln Asp Gly	Asp Thr Ala Ala Cys	Ser Leu Ile Gln Ala	Arg		
	590	595	600		
Leu Pro Leu Leu	Leu Ser Cys Cys Cys	Gly Asp Asp Glu Ser	Val		
	605	610	615		
Arg Lys Val Thr	Glu His Leu Ser Gly	Cys Ile Gln Gln Trp	Gly		
	620	625	630		
Asp Ser Val Leu	Gly Arg Arg Cys Arg	Asp Leu Leu Leu Gln	Leu		
	635	640	645		
Tyr Leu Gln Arg	Pro Glu Leu Arg Val	Pro Val Pro Glu Val	Leu		
	650	655	660		
Leu His Ser Glu	Gly Ala Ala Ser Ser	Ser Val Cys Lys Leu	Asp		
	665	670	675		
Gly Leu Ile His	Arg Phe Ile Thr Leu	Leu Ala Asp Thr Ser	Asp		
	680	685	690		

Ser	Arg	Ala	Leu	Glu	Asn	Arg	Gly	Ala	Asp	Ala	Ser	Met	Ala	Cys
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Arg	Lys	Leu	Ala	Val	Ala	His	Pro	Leu	Leu	Leu	Leu	Arg	His	Leu
				710					715					720
Pro	Met	Ile	Ala	Ala	Leu	Leu	His	Gly	Arg	Thr	His	Leu	Asn	Phe
				725					730					735
Gln	Glu	Phe	Arg	Gln	Gln	Asn	His	Leu	Ser	Cys	Phe	Leu	His	Val
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Leu	Gly	Leu	Leu	Glu	Leu	Leu	Gln	Pro	His	Val	Phe	Arg	Ser	Glu
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His	Gln	Gly	Ala	Leu	Trp	Asp	Cys	Leu	Leu	Ser	Phe	Ile	Arg	Leu
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Leu	Leu	Asn	Tyr	Arg	Lys	Ser	Ser	Arg	His	Leu	Ala	Ala	Phe	Ile
				785					790					795
Asn	Lys	Phe	Val	Gln	Phe	Ile	His	Lys	Tyr	Ile	Thr	Tyr	Asn	Ala
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Pro	Ala	Ala	Ile	Ser	Phe	Leu	Gln	Lys	His	Ala	Asp	Pro	Leu	His
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Asp	Leu	Ser	Phe	Asp	Asn	Ser	Asp	Leu	Val	Met	Leu	Lys	Ser	Leu
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Leu	Ala	Gly	Leu	Ser	Leu	Pro	Ser	Arg	Asp	Asp	Arg	Thr	Asp	Arg
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Gly	Leu	Asp	Glu	Glu	Gly	Glu	Glu	Glu	Ser	Ser	Ala	Gly	Ser	Leu
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Pro	Leu	Val	Ser	Val	Ser	Leu	Phe	Thr	Pro	Leu	Thr	Ala	Ala	Glu
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Met	Ala	Pro	Tyr	Met	Lys	Arg	Leu	Ser	Arg	Gly	Gln	Thr	Val	Glu
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Asp	Leu	Leu	Glu	Val	Leu	Ser	Asp	Ile	Asp	Glu	Met	Ser	Arg	Arg
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Arg	Pro	Glu	Ile	Leu	Ser	Phe	Phe	Ser	Thr	Asn	Leu	Gln	Arg	Leu
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Met	Ser	Ser	Ala	Glu	Glu	Cys	Cys	Arg	Asn	Leu	Ala	Phe	Ser	Leu
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Ala	Leu	Arg	Ser	Met	Gln	Asn	Ser	Pro	Ser	Ile	Ala	Ala	Ala	Phe
				950					955					960
Leu	Pro	Thr	Phe	Met	Tyr	Cys	Leu	Gly	Ser	Gln	Asp	Phe	Glu	Val
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Val	Gln	Thr	Ala	Leu	Arg	Asn	Leu	Pro	Glu	Tyr	Ala	Leu	Leu	Cys

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Arg Ile Leu His Met Glu Ala Val Met		
1025		

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 <212> DNA  
 <213> Homo sapiens

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Leu Cys Ala Phe Leu Ser Leu Ser Trp Tyr Ala Ala Leu Ser Gly  
20 25 30



Gln	Lys	Gly	Asp	Val	Val	Asp	Val	Tyr	Gln	Arg	Glu	Phe	Leu	Ala	
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Leu	Arg	Asp	Arg	Leu	His	Ala	Ala	Glu	Gln	Glu	Ser	Leu	Lys	Arg	
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Ser	Lys	Glu	Leu	Asn	Leu	Val	Leu	Asp	Glu	Ile	Lys	Arg	Ala	Val	
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Ser	Glu	Arg	Gln	Ala	Leu	Arg	Asp	Gly	Asp	Gly	Asn	Arg	Thr	Trp	
				80					85					90	
Gly	Arg	Leu	Thr	Glu	Asp	Pro	Arg	Leu	Lys	Pro	Trp	Asn	Gly	Ser	
				95					100					105	
His	Arg	His	Val	Leu	His	Leu	Pro	Thr	Val	Phe	His	His	Leu	Pro	
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His	Leu	Leu	Ala	Lys	Glu	Ser	Ser	Leu	Gln	Pro	Ala	Val	Arg	Val	
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Gly	Gln	Gly	Arg	Thr	Gly	Val	Ser	Val	Val	Met	Gly	Ile	Pro	Ser	
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Val	Arg	Arg	Glu	Val	His	Ser	Tyr	Leu	Thr	Asp	Thr	Leu	His	Ser	
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Leu	Ile	Ser	Glu	Leu	Ser	Pro	Gln	Glu	Lys	Glu	Asp	Ser	Val	Ile	
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Val	Val	Leu	Ile	Ala	Glu	Thr	Asp	Ser	Gln	Tyr	Thr	Ser	Ala	Val	
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Thr	Glu	Asn	Ile	Lys	Ala	Leu	Phe	Pro	Thr	Glu	Ile	His	Ser	Gly	
				200					205					210	
Leu	Leu	Glu	Val	Ile	Ser	Pro	Ser	Pro	His	Phe	Tyr	Pro	Asp	Phe	
				215					220					225	
Ser	Arg	Leu	Arg	Glu	Ser	Phe	Gly	Asp	Pro	Lys	Glu	Arg	Val	Arg	
				230					235					240	
Trp	Arg	Thr	Lys	Gln	Asn	Leu	Asp	Tyr	Cys	Phe	Leu	Met	Met	Tyr	
				245					250					255	
Ala	Gln	Ser	Lys	Gly	Ile	Tyr	Tyr	Val	Gln	Leu	Glu	Asp	Asp	Ile	
				260					265					270	
Val	Ala	Lys	Pro	Asn	Tyr	Leu	Ser	Thr	Met	Lys	Asn	Phe	Ala	Leu	
				275					280					285	
Gln	Gln	Pro	Ser	Glu	Asp	Trp	Met	Ile	Leu	Glu	Phe	Ser	Gln	Leu	
				290					295					300	
Gly	Phe	Ile	Gly	Lys	Met	Phe	Lys	Ser	Leu	Asp	Leu	Ser	Leu	Ile	
				305					310					315	
Val	Glu	Phe	Ile	Leu	Met	Phe	Tyr	Arg	Asp	Lys	Pro	Ile	Asp	Trp	

320	325	330
Leu Leu Asp His Ile Leu Trp Val Lys	Val Cys Asn Pro Glu Lys	
335	340	345
Asp Ala Lys His Cys Asp Arg Gln Lys	Ala Asn Leu Arg Ile Arg	
350	355	360
Phe Lys Pro Ser Leu Phe Gln His Val	Gly Thr His Ser Ser Leu	
365	370	375
Ala Gly Lys Ile Gln Lys Leu Lys Asp	Lys Asp Phe Gly Lys Gln	
380	385	390
Ala Leu Arg Lys Glu His Val Asn Pro	Pro Ala Glu Val Ser Thr	
395	400	405
Ser Leu Lys Thr Tyr Gln His Phe Thr	Leu Glu Lys Ala Tyr Leu	
410	415	420
Arg Glu Asp Phe Phe Trp Ala Phe Thr	Pro Ala Ala Gly Asp Phe	
425	430	435
Ile Arg Phe Arg Phe Phe Gln Pro Leu	Arg Leu Glu Arg Phe Phe	
440	445	450
Phe Arg Ser Gly Asn Ile Glu His Pro	Glu Asp Lys Leu Phe Asn	
455	460	465
Thr Ser Val Glu Val Leu Pro Phe Asp	Asn Pro Gln Ser Asp Lys	
470	475	480
Glu Ala Leu Gln Glu Gly Arg Thr Ala	Thr Leu Arg Tyr Pro Arg	
485	490	495
Ser Pro Asp Gly Tyr Leu Gln Ile Gly	Ser Phe Tyr Lys Gly Val	
500	505	510
Ala Glu Gly Glu Val Asp Pro Ala Phe	Gly Pro Leu Glu Ala Leu	
515	520	525
Arg Leu Ser Ile Gln Thr Asp Ser Pro	Val Trp Val Ile Leu Ser	
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Glu Ile Phe Leu Lys Lys Ala Asp		
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